

# Data Communication and Networking

1. Find out the minimum hamming distance for the following set of codewords set of codewords, (00001, 01010, 00110, 00111, 01011, 11110)
2. Define simple-parity check code.
3. Create the codeword for the dataword 1011 considering C(4,7).
4. Find the syndrome value and derive the correct dataword for the codeword 1111100 considering C(4,7).
5. Define data communication.
6. Define the basic tasks done by each layer of OSI reference model.
7. Find the required bit rate for a channel to download an e-book. Assume that the e-book consists of 500 pages, each page is having 50 lines with 80 characters using ASCII characters.
8. Explain twisted pair cables with its advantages and disadvantages.
9. Host A receives a frame and discards it after determining it is corrupt. Which OSI layer checks frames for errors?
10. Explain and illustrate the difference between the following multiplexing types:
  - i. Frequency Division Multiplexing (FDM);
  - ii. Time Division Multiplexing (TDM);
  - iii. Wavelength Division Multiplexing (WDM).